NMC
Committed to Nuclear Excellence

Palisades Nuclear Plant
Operated by Nuclear Management Company, LLC

January 13, 2005 10 CFR 2.202

Secretary, Office of the Secretary of the Commission
U. S. Nuclear Regulatory Commission
ATTN: Rulemakings and Adjudications Staff
Washington, DC 20555

Palisades Nuclear Plant
Docket 50-255
License No. DPR-20

60-Day Report Per First Revised Order EA-03-009

References: 1) *"Issuance of First Revised Order (EA-03-009) Establishing Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactors," dated February 20, 2004*

2) *Letter from NMC to NRC, "Response To Revised Order EA-03-009," dated March 8, 2004*

By letter dated February 20, 2004, the Nuclear Regulatory Commission (NRC) issued the First Revised Order, EA-03-009 (Reference 1). By letter dated March 8, 2004, Nuclear Management Company, LLC (NMC) consented to the Order for the Palisades Nuclear Plant (Reference 2).

In Section IV.E, of Reference 1, the NRC required that inspection results be provided within 60 days after returning the plant to operation. NMC completed the required inspections and the Palisades Nuclear Plant was returned to service on November 17, 2004, after completion of the refueling outage. Enclosure 1 provides details of the inspection results.

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Summary of Commitments

This letter contains no new commitments and no revisions to existing commitments.

I declare under penalty of perjury that the foregoing is true and correct. Executed on January 13, 2005.

Daniel J. Malone
Site Vice President, Palisades Nuclear Plant
Nuclear Management Company, LLC

Enclosures (1)

CC Administrator, Region III, USNRC
Project Manager, Palisades, USNRC
Resident Inspector, Palisades, USNRC
Director, Office of Nuclear Reactor Regulation
Assistant General Counsel for Materials Litigation and Enforcement
Document Control Desk

ENCLOSURE 1
60-DAY REPORT PER FIRST REVISED ORDER EA-03-009
PALISADES NUCLEAR PLANT RPV HEAD PENETRATION INSPECTION RESULTS

1.0 INTRODUCTION

The Palisades Nuclear Plant reactor pressure vessel (RPV) head had approximately 9.67 effective degradation years (EDY) at the start of the 2004 refueling outage. Therefore, the susceptibility category for the Palisades Nuclear Plant reactor head was Moderate, as defined by the First Revised Order, EA-03-009, "Issuance of First Revised Order (EA-03-009) Establishing Interim Inspection Requirements for Reactor Pressure Vessel Heads at Pressurized Water Reactors." Per the moderate category, inspections were performed in accordance with Section IV.C.(2), of the First Revised Order.

Palisades Nuclear Plant was returned to operation on November 17, 2004, after completion of a refueling outage. During the refueling outage, each RPV head penetration was ultrasonically examined in accordance Section IV.C.(5)(b)(i) of the First Revised Order. This included 45 control rod drive (CRD) penetrations and eight in-core instrumentation (ICI) penetrations. Additionally, ultrasonic and eddy current examinations were performed on the RPV head vent line penetration in accordance with Section IV.C (5)(b)(iii), of the First Revised Order.

2.0 DESCRIPTION OF INSPECTION METHODS

The examinations were performed by AREVA qualified personnel using qualified procedures. The inspection included performing ultrasonic examinations from the inner diameter (ID) of the nozzle, for all 54 of the RPV head penetrations. Additionally, a small portion of the ICI nozzle below the J-groove weld was ultrasonically examined from the outer diameter to ensure that the required examination volume was achieved. The RPV head vent line penetration was also examined by eddy current on the surface of the J-groove weld. The vent line does not extend below the RPV head inside surface. Due to indications identified on two of the CRD penetrations, a bare metal visual inspection was performed, as required by Section IV.C.(5)(a), of the First Revised Order. The bare metal visual inspection was performed by direct visual examination.

3.0 REACTOR PRESSURE VESSEL HEAD INSPECTION RESULTS

Ultrasonic examination of the RPV head penetrations identified two leak path detection indications on penetrations 29 and 30. In accordance with the First Revised Order, a bare metal visual inspection of the exterior of the RPV head was subsequently performed. Although no evidence of leakage was visible during the bare metal inspection, a dye-penetrant exam showed minor surface indications that required further evaluation.

On penetration 29, during grinding activities, an approximately ¼-inch long axial crack was identified perpendicular to the fusion line of the J-groove weld. On penetration 30, during grinding activities, a through-wall circumferential crack, approximately one-inch long, was identified adjacent to the fusion line of the J-groove weld. Penetrations 29 and 30 were repaired using the AREVA ID temper bead repair process. The Nuclear Regulatory Commission (NRC) approved this repair process for use at the Palisades Nuclear Plant by letter dated November 8, 2004.

NRC regional inspectors performed an inspection of the RPV head during the 2004 refueling outage. Documentation of this inspection will be in the NRC routine fourth quarter inspection report.

4.0 CONCLUSIONS

NMC has complied with the requirements of the First Revised Order for the 2004 refueling outage. Based on the results of the examinations and subsequent repairs performed during the refueling outage, NMC concluded that the RPV head penetrations that were returned to service were not degraded, and no wastage of the RPV head occurred.

Due to the discovery of the leak path indications and subsequent repair, the Palisades Nuclear Plant RPV head is now in the High Susceptibility category, as defined by the First Revised Order. Therefore, future outage inspections will be conducted per Section IV.C.(1), of the First Revised Order.